Section II-iii-J

Soil Features

This table gives estimates of several important soil features which are used in land use planning that involves engineering considerations. Soil features which are covered include bedrock depth and hardness, cemented pan depth and hardness, subsidence, potential frost action, and risk of corrosion for uncoated steel or for concrete.

Depth to Bedrock

This value is given if bedrock is within a depth of 60 inches. The depth is based on many soil borings and observations made during soil mapping. The rock is specified as either soft or hard. If the rock is soft, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is hard or massive, blasting or special equipment generally is needed for excavation.

Cemented Pan

Cemented pan is a nearly continuous layer of indurated or strongly cemented material having a hard, brittle consistency because the particles are held together by cementing substances such as, calcium carbonate, or oxides of silicon, iron, or aluminum. These layers are identified when they occur within a depth of 60 inches. Pans are classified as "thin" or "thick". "Thin" cemented pans are thin enough so that excavations can be made with trenching machines, backhoes, or small rippers and other equipment common to construction of pipelines, sewerlines, cemeteries, and the like. "Thick" cemented pans are sufficiently thick or massive to require blasting or special equipment beyond which is considered normal in excavating for this type of construction.

Subsidence

Subsidence potential is the maximum possible loss of surface elevation from the drainage of wet soils having organic layers or semifluid mineral layers. Estimates of the depth of subsidence (in inches) that takes place soon after drainage (initial subsidence) and after oxidation (total subsidence) are given for soils that are likely to subside.

Potential Frost Action

This is the likelihood of upward or lateral movement of soil by the formation of segregated ice lenses (frost heave) and the subsequent loss of soil strength upon thawing. The following classes are used in regions where frost action is a potential problem: (1) Low -- soils are rarely susceptible to the formation of ice lenses, (2) Moderate -- soils are susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of soil strength, and (3) High -- soils are highly susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of soil strength.

Risk of Corrosion

Various metals and other materials corrode when on or in the soil, and some metals and materials corrode more rapidly when in contact with specific soils than when in contact with others. Corrosivity ratings are given for two of the common structural materials, uncoated steel and concrete. The risk of corrosion classes are low, moderate, and high.

See the National Soil Survey Handbook, Part 618, for definitions and discussion of particular properties.

Soil Features

Waldo County, Maine

Absence of an entry indicates that the feature is not a concern or that data were not estimated.

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial	Total	Action Steel	Uncoated	Concrete
	Kind	In	In		In	In				
AdB:										
Adams	---	---	---	---	0	---	Low	Low	High	
AdC:										
Adams	---	---	---	---	0	---	Low	Low	High	
AdD:										
Adams	---	---	---	---	0	---	Low	Low	High	
BaB:										
Bangor	---	---	---	---	0	---	Moderate	Low	Moderate	
BaC:										
Bangor	---	---	---	---	0	---	Moderate	Low	Moderate	
BaD:										
Bangor	---	---	---	---	0	---	Moderate	Low	Moderate	
BbB:										
Bangor	---	---	---	---	0	---	Moderate	Low	Moderate	
BbC:										
Bangor	---	---	---	---	0	---	Moderate	Low	Moderate	
BbD:										
Bangor	---	---	---	---	0	---	Moderate	Low	Moderate	
Be:										

Soil Features - Continued

Waldo County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top	Thickness	Hardness	Initial	Total	Action	Uncoated	Concrete
	Kind		Thickness	Hardness				Steel		
		In	In		In	In				
Be:										
Beaches	---	---	---	---	0	---	Low	High	High	
Bf:										
Biddeford	---	---	---	---	0	---	High	High	Moderate	
BoB:										
Boothbay	---	---	---	---	0	---	High	Moderate	Moderate	
BoC:										
Boothbay	---	---	---	---	0	---	High	Moderate	Moderate	
BoD:										
Boothbay	---	---	---	---	0	---	High	Moderate	Moderate	
BoE3:										
Boothbay	---	---	---	---	0	---	High	Moderate	Moderate	
BpB:										
Boothbay	---	---	---	---	0	---	High	Moderate	Moderate	
Bs:										
Borosaprists	---	---	---	---	0	---	High	Moderate	High	
BtB:										
Brayton	---	---	---	---	0	---	High	High	Moderate	
BvB:										
Brayton	---	---	---	---	0	---	High	High	Moderate	

Soil Features - Continued

Waldo County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial	Total	Action Steel	Uncoated	Concrete
	Kind	In	In		In	In				
BxB:										
Brayton	---	---	---	---	0	---	High	High	Moderate	
Ch:										
Charles	---	---	---	---	0	---	High	High	Moderate	
DxB:										
Dixmont	---	---	---	---	0	---	High	Moderate	Moderate	
DxC:										
Dixmont	---	---	---	---	0	---	High	Moderate	Moderate	
DyB:										
Dixmont	---	---	---	---	0	---	High	Moderate	Moderate	
DyC:										
Dixmont	---	---	---	---	0	---	High	Moderate	Moderate	
ElB:										
Eldridge	---	---	---	---	0	---	Moderate	Moderate	High	
ElC:										
Eldridge	---	---	---	---	0	---	Moderate	Moderate	High	
HeB:										
Hermon	---	---	---	---	0	---	Low	Low	High	
HeC:										
Hermon	---	---	---	---	0	---	Low	Low	High	

Soil Features - Continued

Waldo County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top	Thickness	Hardness	Initial	Total	Action	Uncoated	Concrete
	Kind		Thickness	Hardness				Steel		
		In	In		In	In				
HfC:										
Hermon	---	---	---	---	0	---	Low	Low	High	
HfD:										
Hermon	---	---	---	---	0	---	Low	Low	High	
HgC:										
Hermon	---	---	---	---	0	---	Low	Low	High	
HgD:										
Hermon	---	---	---	---	0	---	Low	Low	High	
Le:										
Lovewell	---	---	---	---	0	---	High	Moderate	Moderate	
Lk:										
Limerick	---	---	---	---	0	---	High	High	Moderate	
Rumney	---	---	---	---	0	---	High	High	High	
LrB:										
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
LrC:										
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	

Soil Features - Continued

Waldo County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top	Thickness	Hardness	Initial	Total	Action	Uncoated	Concrete
	Kind		Thickness	Hardness				Steel		
		In	In		In	In				
LrE:										
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
MaB:										
Madawaska	---	---	---	---	0	---	Moderate	Moderate	High	
MbB:										
Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MbC:										
Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MbD:										
Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MeB:										
Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MeC:										
Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MeD:										
Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MeE:										
Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MfC:										

Soil Features - Continued

Waldo County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top	Thickness	Hardness	Initial	Total	Action	Uncoated	Concrete
	Kind		Thickness	Hardness				Steel		
		In	In		In	In				
MfC:										
Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MfE:										
Marlow	---	---	---	---	0	---	Moderate	Low	Moderate	
MkB:										
Masardis	---	---	---	---	0	---	Low	Low	Moderate	
MkC:										
Masardis	---	---	---	---	0	---	Low	Low	Moderate	
MkE:										
Masardis	---	---	---	---	0	---	Low	Low	Moderate	
MrB:										
Masardis Variant	Bedrock (lithic)	20-40	---	---	0	---	Low	Low	Moderate	
MrC:										
Masardis Variant	Bedrock (lithic)	20-40	---	---	0	---	Low	Low	Moderate	
MsB:										
Masardis Variant	Bedrock (lithic)	20-40	---	---	0	---	Low	Low	Moderate	
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
MsC:										
Masardis Variant	Bedrock (lithic)	20-40	---	---	0	---	Low	Low	Moderate	

Soil Features - Continued

Waldo County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top	Thickness	Hardness	Initial	Total	Action	Uncoated	Concrete
	Kind		Thickness	Hardness				Steel		
		In	In		In	In				
MsC:										
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
MwB:										
Monarda	---	---	---	---	0	---	High	High	High	
My:										
Medomak	---	---	---	---	0	---	High	High	Moderate	
MyB:										
Monarda	---	---	---	---	0	---	High	High	High	
Na:										
Naumburg	---	---	---	---	0	---	Moderate	High	High	
PaB:										
Peru	---	---	---	---	0	---	High	Moderate	Moderate	
PaC:										
Peru	---	---	---	---	0	---	High	Moderate	Moderate	
PbB:										
Peru	---	---	---	---	0	---	High	Moderate	Moderate	
PbC:										
Peru	---	---	---	---	0	---	High	Moderate	Moderate	
PcB:										
Peru	---	---	---	---	0	---	High	Moderate	Moderate	

Soil Features - Continued

Waldo County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top	Thickness	Hardness	Initial	Total	Action	Uncoated	Concrete
	Kind		Thickness	Hardness				Steel		
		In	In		In	In				
PcC:										
Peru	---	---	---	---	0	---	High	Moderate	Moderate	
PcD:										
Peru	---	---	---	---	0	---	High	Moderate	Moderate	
Pg:										
Pits	---	---	---	---	0	---	None	---	---	
Py:										
Podunk	---	---	---	---	0	---	High	Moderate	Moderate	
Qu:										
Quarries	Bedrock (lithic)	0	---	---	0	---	None	---	---	
Rc:										
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
RmC:										
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
RmE:										
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
Sa:										

Soil Features - Continued

Waldo County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top	Thickness	Hardness	Initial	Total	Action	Uncoated	Concrete
	Kind		Thickness	Hardness				Steel		
		In	In		In	In				
Sa:										
Saco	---	---	---	---	0	---	High	High	Moderate	
Se:										
Searsport	---	---	---	---	0	---	Moderate	High	High	
Su:										
Sulfaquents	---	---	---	---	0	---	High	High	High	
Sulfihemists	---	---	---	---	---	---	None	High	High	
Sw:										
Swanville	---	---	---	---	0	---	High	High	Low	
ThB:										
Thorndike	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Moderate	High	
Winnecook	Bedrock (lithic)	20-40	---	---	0	---	Moderate	Moderate	High	
ThC:										
Thorndike	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Moderate	High	
Winnecook	Bedrock (lithic)	20-40	---	---	0	---	Moderate	Moderate	High	
ThD:										
Thorndike	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Moderate	High	
Winnecook	Bedrock (lithic)	20-40	---	---	0	---	Moderate	Moderate	High	
TkB:										

Soil Features - Continued

Waldo County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top Thickness	Thickness Hardness	Hardness	Initial	Total	Action Steel	Uncoated	Concrete
	Kind	In	In		In	In				
TkB:										
Thorndike	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Moderate	High	
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
TkC:										
Thorndike	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Moderate	High	
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
TkE:										
Thorndike	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Moderate	High	
Rock Outcrop	Bedrock (lithic)	0	---	---	0	---	None	---	---	
TrB:										
Tunbridge	Bedrock (lithic)	20-40	---	---	0	---	Moderate	High	High	
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
TrC:										
Tunbridge	Bedrock (lithic)	20-40	---	---	0	---	Moderate	High	High	
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
TrD:										
Tunbridge	Bedrock (lithic)	20-40	---	---	0	---	Moderate	High	High	

Soil Features - Continued

Waldo County, Maine

Map Symbol and Soil Name	Restrictive Layer				Subsidence		Potential for Frost	Risk of Corrosion		
	Kind	Depth to Top	to Top	Thickness	Hardness	Initial	Total	Action	Uncoated	Concrete
	Kind		Thickness	Hardness				Steel		
		In	In		In	In				
TrD:										
Lyman	Bedrock (lithic)	10-20	---	---	0	---	Moderate	Low	High	
Ud:										
Udorthents	---	---	---	---	0	---	---	---	---	
Urbanland	---	---	---	---	0	---	None	---	---	